IN THE CLAIMS:

Claim 1 (currently amended). ~~An~~ In an alcohol-air fuel cell comprising:

an anode chamber ~~with~~ comprising a ~~liquid catalytically active~~ anode and a liquid fuel, an air chamber comprising a ~~with a catalytically active~~ gas-diffusion cathode and a cathode catalyst, an electrolyte chamber ~~with~~ comprising a liquid electrolyte and a membrane electrolyte, which is positioned between the cathode and the anode, ~~characterized in that~~ the improvement wherein the liquid electrolyte is an aqueous alkaline solution ~~is used as the liquid electrolyte~~ and the cathode catalyst is a non-platinum catalyst, tolerant in respect to alcohol~~;~~ ~~is used as the cathode catalyst~~.

Claim 2 (currently amended). The fuel cell according to claim 1, ~~characterized in that~~ wherein the membrane electrolyte is a porous matrix impregnated with an alkaline electrolyte ~~is used as the membrane electrolyte~~.

Claim 3 (currently amended). The fuel cell according to claim 2, wherein the porous matrix is ~~characterized in that~~ an asbestos matrix ~~is used as the porous matrix~~.

Claim 4 (currently amendment). The fuel cell according to claim 1, wherein the membrane electrolyte is ~~characterized in that~~ an anion-exchange membrane ~~is used as the membrane electrolyte~~.

Claim 5 (currently amended). The fuel cell according to claim 4, wherein the anion-exchange membrane is ~~characterized in that~~ a membrane of polybenzimidazole, doped with OH ions; ~~is used as the anion-exchange membrane~~.

Claim 6 (currently amended). The fuel cell according to claim 1, wherein the cathode is ~~characterized in that~~ a two-layer gas-diffusion electrode with a hydrophilic barrier layer facing toward the electrolyte chamber and with an active layer facing toward the air chamber ~~is used as the cathode~~.

Claim 7 (currently amended). The fuel cell according to claim 1, wherein the cathode is ~~characterized in that~~ a two-layer gas-diffusion electrode with a hydrophilic barrier layer facing toward the air chamber and with an active layer facing toward the electrolyte chamber ~~is used as the cathode~~.

Claim 8 (currently amended). The fuel cell according to claim 1, wherein ~~characterized in that~~ the anode comprises ~~consists of~~ an active layer, comprising 3 - 7 wt. % of fluoroplastic, and a membrane comprising ~~on the base of~~ polybenzimidazole.

Claim 9 (currently amended). The fuel cell according to claim 1, wherein ~~characterized in that~~ the anode comprises ~~consists of~~ an active layer, comprising 2 - 7 wt. % of polybenzimidazole, and a membrane ~~on the base of~~ comprising polybenzimidazole.

Claim 10 (currently amended). The fuel cell according to claim 1, wherein ~~characterized in that~~ the anode comprises ~~consists of~~ a porous nickel band, filled with polybenzimidazole, and an active layer comprising 3 - 7 wt. % of fluoroplastic.

Claim 11 (currently amended). The fuel cell according to claim 1, wherein ~~characterized in that~~ the anode comprises ~~consists of~~ a porous nickel band, filled with polybenzimidazole, and an active layer comprising 2 - 7 wt. % of polybenzimidazol.

Claim 12 (currently amended). The fuel cell according to claim 1, wherein ~~characterized in that~~ the anode comprises ~~consists of~~ asbestos, impregnated with polybenzimidazole, and an active layer comprising 3 - 7 wt. % of fluoroplastic and 2 - 7 wt. % of polybenzimidazole.

Claim 13 (currently amended). The fuel cell according to claim 1, wherein the anode chamber comprises an anode catalyst comprising a ~~characterized in that~~ a nickel-ruthenium alloy ~~system is used as the anode catalyst~~.

Claim 14 (currently amended). The fuel cell according to claim 1, wherein the non-platinum catalyst comprises ~~characterized in that~~ silver on a carbon carrier ~~is used as the non-platinum catalyst~~.

Claim 15 (currently amended). The fuel cell according to claim 14, wherein the ~~1,~~ ~~characterized in that~~ silver on the carrier is 7 - 18 wt. %.

Claim 16 (currently amended). The fuel cell according to claim 14, wherein the carbon container comprises ~~1, characterized in that~~ carbon black or graphite with a specific surface of at least 60 - 80 m^2/g ~~is used as the carbon carrier for the silver catalyst~~.

Claim 17 (currently amended). The fuel cell according to claim 1, wherein the non-platinum catalyst comprises ~~characterized in that~~ pyropolymers of N_4 - complexes on a carbon carrier ~~are used as the non-platinum catalyst~~.

Claim 18 (currently amended). The fuel cell according to claim 17, wherein ~~1, characterized in that~~ the content of the pyropolymer on the carbon carrier is 10 - 20 wt. %.

Claim 19 (currently amended). The fuel cell according to claim 17, wherein the carbon carrier comprises ~~1, characterized in that~~ carbon black or graphite with a specific surface of at least 60 - 80 m^2/g ~~is used as the carbon carrier for the pyropolymer catalyst~~.

Claim 20 (currently amended). The fuel cell according to claim 13, wherein the anode catalyst comprises ~~characterized in that~~ Raney nickel alloy with a ratio Ni:Al equal to 50:50 ~~is used as the anode catalyst of the nickel-ruthenium system~~.

Claim 21 (currently amended). The fuel cell according to claim 20, wherein the anode catalyst ~~characterized in that the Renay nickel used in the anode catalyst~~ additionally comprises a molybdenum additive with the anode catalyst having a ratio of Ni:Al:Mo equal

to 40:50:10.

Claim 22 (currently amended). The fuel cell according to claim 20, wherein ~~characterized in that~~ the ~~Renay~~ Raney nickel alloy ~~used~~ in the anode catalyst is additionally promoted with platinum.

Claim 23 (currently amended). The fuel cell according to claim 21, wherein ~~characterized in that~~ the ~~Renay~~ Raney nickel alloy with molybdenum additive~~, used~~ in the anode catalyst, is additionally promoted with platinum.

Claim 24 (currently amended). The fuel cell according to claim 22, ~~characterized in that~~ wherein the anode catalyst has a ~~the~~ content of platinum and ruthenium ~~in the anode catalyst~~ ~~is~~ of 8 - 15 wt. % with the content of platinum equal to 0.08 - 0.3 wt. %.

Claim 25 (currently amended). The fuel cell according to claim 22, wherein the ~~characterized in that~~ platinum and ruthenium are present in the anode catalyst in the form of crystals of Pt - Ru alloy having a size of 5 - 7 nm and a specific surface of 45 - 60 m^2/g.

Claim 26 (currently amended). The fuel cell according to claim 13, wherein ~~characterized in that~~ the anode has a three-layer structure including a porous base, a layer facing the electrolyte, filled with polybenzimidazole, and an active layer comprising a catalyst and polybenzimidazole.